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09/369,134	08/05/1999	ORAN D. TARLTON	LTVA:102	6392

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EXAMINER

PATEL, VISHAL A

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 20

Application Number: 09/369,134
Filing Date: August 05, 1999
Appellant(s): TARLTON, ORAN D.

MAILED

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GROUP 3600

Oran D. Tarlton
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/13/03.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

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(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 3 to 10, 10 to 14 and 21 to 26 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

1,426,724	Fyffe	8-1922
5,651,494	Ogino et al	7-1997
4,563,025	Poe	1-1986

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(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-4, 6, 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe (US. 1,426,724) in view of Ogino et al (U.S. 5,651,494).

Fyffe discloses:

a composite metal seal comprising a core of relatively hard metal (c) and at least one annular region of relatively soft metal (c) that is integrally with the core of relatively hard metal and that provides an annular sealing surface for effecting a fluid pressure seal;

the core of relatively hard metal is inlaid and overlaid with the relatively soft metal of the annular region of relatively soft metal (figure 3);

the composite metal seal has a longitudinal axis, and the sealing surface is tapered with respect to the longitudinal axis;

Regarding claim 8, 10 and 13:

a composite metal seal ring (c and d) for effecting a fluid pressure seal with respective annular surfaces of first and second hub members (inside surfaces where a and b contact c). The composite metal seals ring comprising an annular core of relatively hard metal (c) and a first annular region (one of d) of relatively soft metal integrally to the annular core of relatively hard

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metal (c). A second annular region of relatively soft metal (second of d) bonded to the annular core of relatively hard metal. The first annular region of relatively soft metal having a first annular surface for mating (figure 3) with the annular surface of the first hub member to effect fluid pressure seal with the first hub member. The second annular region of relatively soft metal having a second annular surface for mating with the annular surface of the second hub member. The two annular regions of relatively soft metal are displaced from each other along a longitudinal axis of the composite metal seal ring (figure 3);

the annular core of relatively hard metal is inlaid and overlaid with the relatively soft metal of the first annular region of relatively soft metal. The annular core of relatively hard metal is inlaid and overlaid with the relatively soft metal of the second annular region of relatively soft metal;

the composite metal seal ring has a longitudinal axis (longitudinal axis parallel to the pipes g and j), the first annular region of relatively soft metal is tapered with respect to the longitudinal axis to have a varying radius that is smallest away from the second annular region of relatively soft metal and that is largest toward the second annular region of relatively soft metal. The second annular region of relatively soft metal is tapered with respect to the longitudinal axis to have a varying radius that is smallest away from the first annular region of relatively soft metal and that is largest toward the first annular region of relatively soft metal (figure 3);

the composite metal seal ring is a pressure energized seal and a compression seal (the fluid in the pipe g and j provide pressure to the seal and the compression of the seal is by f);

the composite metal seal ring has an internal diameter (figure 3);

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the composite metal seal ring is adapted to containing a pressure within the hubs (column 2, lines 63-66).

Fyffe fails to disclose that the hard and soft metals are integrally bonded together. Ogino discloses integrally bonding of hard metal to soft metal by welding. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the hard metal and soft metal of Fyffe to be welding as taught by Ogino to provide a bond between metals and also to prevent loss of the soft metal from the hard metal (column 1, lines 41-43).

3. Claims 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe and Ogino.

Fyffe and Ogino disclose the claimed invention except for the thickness of the first and second annular region of relatively soft metal to be 1/8 of an inch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the first and second annular region of relatively soft metal of Fyffe and Bloom to have a thickness of 1/8 inch, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

4. Claims 5, 7, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe and Ogino and in further view of Poe (US. 4,563,025).

Fyffe and Ogino disclose the invention substantially as claimed above, but does not disclose the first annular region of relatively soft metal has at least one annular groove in the neighborhood of the annular surface of the first annular region of relatively soft metal and the second annular region of relatively soft metal has at least one annular groove in the neighborhood of the annular surface of the second annular region of relatively soft metal and the

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grooves are rectangular in cross-section and having walls that are perpendicular to the tapered annular surfaces of the first and second annular regions.

Poe disclose grooves on top of a deformable seal ring and the grooves are rectangular in cross-section and having walls that are perpendicular to tapered annular surfaces of the deformable seal ring (figure 5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first and second annular region of relatively soft metal to have grooves as taught by Poe, to maintain the integrity of all radial compression to the ring and also to enable the ring to remain within the elastic limit of the seal ring material (abstract of Poe, lines 15-31).

5. Claim 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe and Ogino and in further view of Poe.

Fyffe and Ogino disclose the invention substantially as claimed above but fails to disclose the first annular region of relatively soft metal has at least one annular groove in the neighborhood of the annular surface of the first annular region of relatively soft metal and the second annular region of relatively region soft metal has at least one annular groove in the neighborhood of the annular surface of the second annular region of relatively soft metal and the grooves are rectangular in cross-section and having walls that are perpendicular to the tapered annular surfaces of the first and second annular regions.

Poe disclose grooves on top of a deformable seal ring and the grooves are rectangular in cross-section and having walls that are perpendicular to tapered annular surfaces of the deformable seal ring (figure 5).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first and second annular region of relatively soft metal to have grooves as taught by Poe, to maintain the integrity of all radial compression to the ring and also to enable the ring to remain within the elastic limit of the seal ring material (abstract of Poe, lines 15-31).

6. Claims 23, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe, Ogino and Poe.

Fyffe, Ogino and Poe disclose the claimed invention except for the composite metal seal ring is *adapted for containing pressure within the hubs of at least 10000 psi* or the composite metal seal ring has an internal diameter of at least 3 inches. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the composite metal seal ring of Fyffe to contain high pressure within the hubs of at least 10000 psi or to make the internal diameter of the composite metal seal ring of Fyffe to be at least 3 inches, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

(11) Response to Argument

In response to appellant's argument that Ogino is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Ogino is not in the same field of endeavor but teaches to weld two metals together to provide a bond so the metals would not fall

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apart which is the function of a weld. Thus while the first part of the test for nonanalogous art is not met by Ogino, the second part of the test is since a person of ordinary skill in the art of seals would reasonably be lead to the art of welding for holding two metal parts together.

Appellant's arguments filed on 1/13/03 have been considered but are not persuasive. The argument that Ogino fails in "suggesting that his ultrasonic welding should be used for fabricating a pressure seal" is not persuasive since Ogino is used to teach only that two metals can be welded together to provide a bond between the two metals.

Appellant's argument that Poe is directed to "the use of desirably hardened metal sealing rings made of stainless steel, for example, and cooperation with seats of softer metal or portions thereof might be deformed or scored" is not persuasive since Poe is used to teach only that grooves (recesses 40 of Poe) on a sealing ring are made to distribute stress pattern and to enable the ring to remain within the elastic limit of the seal ring material (abstract lines 27-31, "The recesses between the sealing lands of the sealing ring are provided, additionally, in such sealing ring to distribute the stress pattern and also to enable the ring to remain within the elastic limit of the seal ring material").

Appellant's argument that Poe places grooves in the relatively hard material of the seal in comparison to the relatively soft material of the seat structure of the flange members is not persuasive, since Poe is merely used to teach grooves in a sealing ring. It appears that appellant is arguing that Poe must be bodily incorporated into Fyffe, such is not the case. Poe is relied upon for what it teaches and that is distribution of stress in a sealed joint by the use of grooves and lands.

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In response to appellant's argument that "the composite metal seal is Poe's discloses groove but not a groove for receiving elastomeric O-rings, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Appellant may disclose that O-rings are placed in the grooves; however, the claims do not set forth this limitation, limitations contained in the specification will not be read into the claims.

In response to appellant's argument that "the composite metal seal is **adapted for** containing a pressure within the hubs of at least 10,000 psi", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). No difference is detected between the claims of the present application and the combination of Fyffe and Ogino.

In response to appellant's argument that the references fail to show certain features of appellant's invention, it is noted that the features upon which appellant relies (i.e., in order to permit elastomeric O-rings to be used with the seal for sealing hub surface which have been

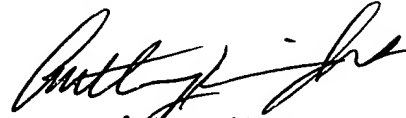
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slightly damaged;... and adapted for solving the problem of making sub-sea pipe connections that can be set and reset a number of times during remote assembly and disassembly of high-pressure sub-sea pipelines) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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VP
March 12, 2003

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